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Factors related to relapse in the dedicated twelve-step population

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FACTORS RELATED TO RELAPSE IN THE DEDICATED TWELVE-STEP POPULATION

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by

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ABSTRACT

FACTORS RELATED TO RELAPSE IN THE DEDICATED TWELVE-STEP POPULATION

by Kristin M. Wieduwilt

This thesis investigates the relationship between various physiological, personality, and biogenetic/ environmental factors that differentiate relapsers from non-relapsers in the dedicated Santa Clara County Alcoholics Anonymous (AA) population. Ninety-two long-term members of AA participated in a self-report survey that captured information about locus of control, self-efficacy, self-esteem, level of spirituality, family history, and exercise habits. Non-relapsers reported significantly higher levels of social self-efficacy, self-esteem, and intrapersonal and interpersonal spirituality, while relapsers scored significantly higher in external locus of control. Non-relapsers were also significantly more likely to have completed all twelve steps of the AA program and to have participated in service at meetings. The results are discussed in relation to the concept of appropriate client/treatment matching in alcoholism treatment programs and inpatient aftercare.

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ABSTRACT

This thesis investigates the relationship between various physiological, personality, and biogenetic/environmental factors that differentiate relapsers from non-relapsers in the dedicated Santa Clara County Alcoholics Anonymous (AA) population. Ninety-two long-term members of AA participated in a self-report survey that captured information about locus of control, self-efficacy, self-esteem, level of spirituality, family history, and exercise habits. Non-relapsers reported significantly higher levels of social self-efficacy, self-esteem, and intrapersonal and interpersonal spirituality, while relapsers scored significantly higher in external locus of control. Non-relapsers were also significantly more likely to have completed all twelve steps of the AA program and to have participated in service at meetings. The results are discussed in relation to the concept of appropriate client/treatment matching in alcoholism treatment programs and inpatient aftercare.

Factors Related to Relapse in the Dedicated Twelve-Step Population

The problem of relapse continues to be an important challenge for those struggling with recovery from alcoholism. Treatment outcome studies indicate approximately an 80% relapse rate after initial attempts at abstinence (Hunt, Barnett, & Branch, 1971). Since its inception in 1935, Alcoholics Anonymous (AA) has been one of the most highly recognized organizations in the field of alcoholism treatment. AA is a worldwide fellowship of men and women who help each other to stay sober. With over 78,000 groups in 114 countries, AA has become the largest self-help treatment organization in the world today. More than one million men and women worldwide have been and continue to be assisted and supported in their recovery by this spiritually-based twelve-step program. Yet, while there are those who readily achieve and maintain long-term sobriety through the program of Alcoholics Anonymous, there are others in AA who find themselves lapsing repeatedly, even though they have an apparent desire to stay sober.

Since its beginning, AA has always maintained that alcoholism is a biopsychosocial disease, and that its primary goal is helping recovering alcoholics in the lifelong process of maintaining their sobriety. In the pamphlet, AA as a Resource for the Medical Professional

(1982), it is stated that "Alcoholism, in AA's opinion, is a progressive illness, spiritual and emotional (or mental), as well as physical" (p. 6). AA affords the alcoholic a daily reprieve from drinking and an opportunity for long-term sobriety through working the "steps" of the program within a social, supportive environment.

In a review of the recent literature about relapse and AA, there exists a conspicuous gap in the research concerning the investigation of relapse in the general AA population from a multidimensional perspective. While there have been numerous studies that support the efficacy of AA for inpatient treatment aftercare (Hoffman, Harrison, & Belille, 1983; Khantzian, 1986; Pettinati, Sugerman, DiDonato, & Maurer, 1982; Thurstin, Alfano, & Nerviano, 1987; Vaillant, 1988), as well as many twelve-step based programs that espouse a multimodal approach to the treatment of alcoholism (Brown, Peterson, & Cunningham, 1988; Gorski, 1989; Watson, 1991), few of these studies have specifically investigated the major variables theorized to foment the relapse process. Furthermore, among those studies that have purported to investigate the nature of relapse from a multivariate perspective (Ellis & McClure, 1992; Gallant, 1989; Knouse & Schneider, 1987), most have investigated AA involvement as an adjunct to inpatient treatment rather than as a modality in and of itself.

This apparent lack of research on the general long-term AA membership, separate from treatment program aftercare, can most likely be attributed to two reasons. Due to the anonymity inherent in the basic tenants of the AA program, data collection within the general AA population is challenging at best, and follow-up is nearly impossible. Moreover, the practical application of such information as it pertains to clients involved in formal treatment programs is somewhat questionable, since results may not necessarily generalize to a clinical population.

While this attitude appears implicit in the majority of twelve-step research to date, the value of research able to identify characteristics that distinguish the most successful long-term AA members from those who struggle with their sobriety lies in the area of appropriate and successful client/treatment matching. McCown (1989) noted that because twelve-step groups traditionally resist research efforts that include the examination of what personality characteristics of members are associated with long-term abstinence, practicing clinicians have little research to guide them regarding the degree to which a substance abusing client should be encouraged to participate in twelve-step self-help groups. By identifying the characteristics that differentiate relapsers and non-relapsers in the long-term, dedicated AA membership, insight

may be gained into which factors appear best to determine success in AA (i.e., maintenance of continuous sobriety). Such information could be used in identifying areas of improvement for those who demonstrate a tendency toward relapse. Through awareness and understanding of their potential weaknesses, individuals who are deficient in certain key areas will be better able to address their shortcomings, either within the framework of AA, or potentially through concurrent outside interventions such as individual therapy or skills training workshops. This sentiment was echoed in an extensive literature review conducted by Brownell, Marlatt, Lichtenstein, and Wilson (1986), where it was suggested that guidelines are needed to refine the active components of these groups and to determine which people are best suited for self-help approaches.

Since it is the intention of this study to perform a multivariate assessment of the differences between relapsers and non-relapsers in the long-term AA population, three personality factors, two program-related factors, and five biogenetic/environmental variables were selected for this investigation. These factors have each been previously suggested as possible contributors in the relapse process, and were consequently hypothesized to differentiate significantly between the two groups.

The three personality factors chosen were locus of control, as measure by the Levenson (1973) Locus of Control Scale; self-efficacy, as measured by the Sherer Self-Efficacy Scale (Sherer, Maddux, Merchandante, Prentice-Dunn, Jacobs, & Rogers, 1982); and self-esteem, as measured by the Rosenberg (1965) Self-Esteem Scale. The two program-related factors selected were level of spirituality, as measured by the Whitfield (1984) Spirituality Self-Assessment Scale, and AA involvement, as measured by six AA-related variables. The five biogentic/environmental variables investigated in this study included family history of alcoholism, family history of recovery, family support for and involvement in the recovery process, exercise, and commitment to exercising. These factors were selected in order to provide a more comprehensive picture of the factors related to relapse. Each scale and variable, in order of its appearance on the survey, is discussed in greater detail in the following sections.

Locus of Control. Locus of control refers to the extent to which a person perceives events as contingent upon his or her own behavior or characteristics. People with an internal locus of control believe that their behavior influences events, and are therefore more inclined to expend effort to make changes within themselves and in the world around them. People with an external locus of control tend

to see events as being the result of fate, chance or the behavior of powerful others rather than their own efforts. The Locus of Control Scale, as modified by Levenson (1973), was used in this study to measure internal versus external locus of control. This measure is a 21-item scale, with items equally divided into three components: Internal Control, Control by Powerful Others, and Control by Chance Forces. In this study, it was hypothesized that relapsers would score significantly higher than the non-relapsers on the Control by Powerful Others and Control by Chance Forces subscales, and significantly lower on the Internal Control subscale. This contention is supported by the findings in a recent study by Johnson, Nora, Tan, and Bustos (1991), in which relapsers were found to have a significantly greater external orientation than their non-relapsing counterparts. Furthermore, in a discussion of neuropsychological and personality factors that distinguished between successful and unsuccessful remitters, Miller (1991) pointed to internal locus of control as a significant contributing factor.

Self-Efficacy. The Self-Efficacy Scale (Sherer et al., 1982) was designed to assess one's expectations of personal mastery and success, and is based upon three aspects of self-efficacy proposed by Bandura (1977): the willingness to initiate behavior, the willingness to expend effort in

completing the behavior, and persistence in the face of adversity. The scale consists of 23 items, which are usually combined to form a total score as well as two subscale scores: General Self-Efficacy (17 items), and Social Self-Efficacy (6 items), relating to behavior in social situations. In a psychometric assessment of the Self-Efficacy Scale, Sherer et al. (1982) found a significant positive relationship between self-efficacy, internal locus of control and self esteem.

Numerous studies have reported results indicating substantially higher self-efficacy scores for long-term as compared to short-term sober alcoholics (Annis, 1990; Annis & Davis, 1989; Brownell et al., 1986; Chaney, O'Leary, & Marlatt, 1978; Marlatt & Gordon, 1980; Miller, Ross, Emmerson, & Todt, 1989). Based on the previous findings in the literature, it was anticipated that relapsers in this study would score significantly lower on all self-efficacy subscales than the non-relapsing group.

Self-Esteem. Self-esteem is defined as an individual's global self-perception regarding one's sense of worth; it is one's level of self-acceptance. The Self-Esteem Scale by Rosenberg (1965) was used as a general measure of self-esteem. This scale is one of the most popular measures of self esteem, due primarily to its brevity as well as to the consistency of findings regarding its psychometric

properties (O'Brien, 1985; Shapurian, Hojat, & Nayerhmadi, 1987). The Rosenberg scale consists of ten items, which generally combine into a single score.

It was anticipated that relapsers would rate significantly lower in self-esteem than non-relapsers. Based on the relationship between self-esteem and self-efficacy proposed by Marlatt and Gordon (1985), the results of this study were expected to correlate highly with the results from the Self-Efficacy subscales, while at the same time also measuring characteristics that are different than those associated with self-efficacy.

Level of Spirituality. The Spirituality Self-Assessment Scale developed by Whitfield (1984) was used to measure level of spirituality. This 35-item scale was designed to gauge the extent to which individuals have incorporated various principles of spirituality into their daily lives. Since spirituality is a concept central to all twelve-step programs, it stands to reason that without the ability to ascribe to a spiritual doctrine, the effectiveness of such programs would be somewhat diminished, if not altogether lost. For the purpose of this study, spirituality was conceptualized in more general terms than traditionally defined. Rather than computing a single scale score, the Whitfield Spirituality Scale was broken down into two subscales: intrapersonal spirituality and interpersonal

spirituality. Intrapersonal spirituality was seen as an individual's sense of self and their place in the universe. Interpersonal spirituality, on the other hand, was defined as developing connections with, and love for, other people. For the AA member, cultivating one's spirituality is considered essential for successful recovery from alcoholism. The relationship between spirituality, self-esteem, and recovery in AA is supported in two prominent studies (Corrington, 1989; Johnson, Sandler, & Griffin-Shelley, 1987). In this study, non-relapsers were expected to score significantly higher on all spirituality subscales than the relapsers.

Biogenetic/environmental variables. The second section of the survey consisted of five items that investigated several biogenetic/environmental variables that potentially affect the relapse process. The first question addressed the degree of familial alcoholism, a variable that has previously been suggested as a principal contributor in the etiology of this problem (Anthenelli & Schuckit, 1990; Brooner, Templer, Svikis, Schmidt, & Monopolis, 1990; Vaillant & Milofsky, 1982). The next two questions involve family support for and involvement in the recovery process. These two variables have been linked to enhanced response to addiction treatment (Moos & Finney, 1983). The final two questions in this section review exercise habits. Exercise

has been proposed as a possible physiological factor that mediates the relationships between successful and unsuccessful resistance and relapse via an increase in general well-being and overall self-esteem (Brownell et al., 1986; Krippenstapel, 1987). It was anticipated that relapsers in this study would have a greater degree of familial alcoholism, less family support in their recovery, and be less likely to exercise regularly.

Involvement in AA. The thirteen items in the third section of the survey were designed to gather information about involvement and activity in AA. The first two questions distinguished multiply-addicted individuals from those who were simply alcoholics. Polydrug addiction has been proposed as a significant contributing factor in the relapse process (Krippenstapel, 1987; von Knorring, Oreland, & von Knorring, 1987). The next three items were used to differentiate between the two groups (relapsers and non-relapsers) based on length of affiliation with AA, length of abstinence, and number of "slips" (i.e., alcohol or drug uses) in the prior year. The next six questions were designed to assess level of overall involvement in AA. Frequency of attending meetings and degree of involvement have been shown to correlate positively with length of continuous sobriety (McCown, 1989; Sheeren, 1988; Thurstin et al., 1987). The twelfth question addressed the number of

"steps" the individual has already worked. In a study by Gilbert (1991), degree of agreement with AA's first three steps was found to correlate significantly with number of sober days. The final item asked how the individual was originally referred to AA. Overall, relapsers were expected to score lower than non-relapsers in general involvement, exhibit more polydrug use, and have worked significantly fewer of AA's twelve "steps".

Based on the findings in the literature reviewed, it was hypothesized that there would be quantifiable differences between relapsers and non-relapsers, and that these differences could be measured and utilized to differentiate between the groups. Specifically, it was hypothesized that within the dedicated twelve-step population of Alcoholics Anonymous, there were distinct and measurable differences between relapsers and non-relapsers in their locus of control, self-efficacy, self-esteem, level of spirituality, involvement in AA, family history, and commitment to exercise.

Method

Subjects

The population for this study was defined as the total Santa Clara County Alcoholics Anonymous membership. From this population, 20 groups were selected randomly for participation in the study. One hundred and forty-six

surveys were distributed at 20 meetings over a three-month period. All subjects who participated in the study were considered part of AA's dedicated membership. A dedicated member was defined as any individual who had been associated with AA for at least one year, regardless of their length of sobriety at the time of the survey. This definition was selected in order to eliminate individuals who were not necessarily committed to a twelve-step program of recovery, such as those who were currently being mandated to attend either by recovery treatment programs or by the courts.

Within this committed group, the relapsers were defined as those who had "slipped" within the previous six years, while non-relapsers were classified as those who had maintained continuous sobriety since either their first introduction to AA, or for more than six years.

Materials

Data were collected using a multidimensional self-report survey. The instrument collected demographic and psychosocial data on each individual in a number of key areas. The survey consisted of the Levenson (1973) Locus of Control Scale, the Sherer et al. (1982) Self-Efficacy Scale, the Rosenberg (1965) Self-Esteem Scale, the Whitfield (1984) Spirituality Self-Assessment Scale, five biogenetic/ physiological questions, thirteen questions regarding involvement in AA, and eight demographic questions (see

Appendix A). The eight demographic questions included at the end of the survey were related to age, gender, ethnicity, sexual orientation, marital status, education level, employment status, and coexisting psychiatric disorders.

Design and Procedure

Subjects were solicited to participate in the survey at individual AA meetings. Distribution of the surveys was performed in a manner that was in keeping with AA's tradition of anonymity. Three volunteers, who were also members of AA, were assigned to distribute the surveys at randomly selected meetings throughout Santa Clara County. Permission for distribution was first obtained from the secretary of each individual meeting and a general announcement was made at the beginning of the meeting. The volunteer then outlined the criteria for participation, re-enforced the study's commitment to confidentiality, and requested that those members interested in participating pick up a survey after the meeting. The only criterion for participation was a minimum of one year of association with AA, regardless of their current length of sobriety. Packets were then distributed to those individuals at the end of each meeting who met the criteria and volunteered to participate. A cover letter included within each survey packet reiterated participant qualifications and the study's commitment to anonymity (via a confidentiality statement),

and also explained the need for honesty and completeness in filling out the survey. A deadline of one week was set for completion and return of the survey, thereby insuring a prompt response. A self-addressed, stamped envelope was included as part of the packet, and a post office box was used for the duration of the study in order to insure double anonymity.

Results

Descriptives Statistics. Of the 146 surveys initially distributed, 95 surveys were returned. From this group, three surveys were not used due to insufficient information, leaving a total of 92 surveys for the final analyses. Of the 92 subjects included in the study, 55.4% were male, 90.2% were white, 52.2% were either married or involved, and 85.9% were heterosexual. Subjects ranged in age from 28 to 76 years old, with a mean age of 48 years (M = 47.74, SD = 11.68). All subjects reported having completed high school, and 43.5% had graduated from college. Sixty-eight percent of respondents were employed either full- or part-time, and 78.3% reported no co-occurring psychiatric disorders. Of those reporting any psychiatric illness, the most frequently reported illness was major depression (9.8%), followed by other illnesses, primarily anxiety disorders (6.5%) and bipolar disorder (2.2%). In the area of polydrug use, 51.1% of subjects reported using alcohol only, and 48.9% used both

alcohol and other drugs. Seventy-eight percent of subjects classified themselves as maintenance or "daily" drinkers, and 21.7% saw themselves as periodic or "binge" drinkers. A substantial proportion of respondents (42.4%) were originally referred by either a treatment program or therapist, with 25% referred by a friend or family member, 17.4% self-referred, and 6.5% mandated by the legal system. Based on the previously established criteria, 66 subjects were classified as non-relapsers and 26 were classified as relapsers. All participants were considered part of AA's dedicated membership.

Factor Analysis/Scale Contruction. In order to assess the reliability of the previously developed subscales, each of the four scales was subjected to a factor analysis. Factor analysis is a statistical procedure that permits the user to examine communalities between items to determine whether separate items can be grouped into meaningful clusters. Items that cluster together can then be organized into scales for the purpose of contrasting different groups of respondents on the basis of distinct response sets. The technique allows the user to gain greater understanding of the diverse items on a questionnaire than can be done if each item were treated separately. There are several different methods used in computing factor analyses. For this study, principle axis factoring (PAF) with varimax

rotation was found to be statistically most appropriate. Inter-item correlations for each scale were reviewed prior to all factor analyses, and poorly correlated items were eliminated from further analyses. With the exception of the Rosenberg (1965) Self-Esteem Scale, the results of the factor analyses for each of the scales produced different yet more reliable subscale scores for this group than were originally developed.

Locus of Control. Based on the strength of their inter-item correlations, nine of the original twenty-three items in the Levenson Locus of Control Scale were used in the final factor analysis. The results showed that the nine items loaded distinctly onto two factors or common clusters of items. Table 1 presents the results of the factor analysis with the items that loaded on each factor. A minimum loading of .40 was used as the criterion for inclusion of an item on a factor. An examination of the items falling into Factor 1 showed that they involved being controlled by powerful others or by chance factors, and this factor was termed "External Locus of Control." The three items in Factor 2 clustered around the theme of "Internal Locus of Control." Together, the two factors explained 44.4% of the total variance in the sample.

As a check for internal consistency, a Cronbach alpha coefficient was computed for the total group (See Table 1),

Table 1

Factor Analysis of the Levenson Locus of Control Scale Items

Factor 1: External Locus of Control

Factor 2: Internal Locus of Control

Item	Factor 1	Factor 2
11. I cannot protect my interests when they conflict with powerful others.	.78	
10. I am controlled by powerful others.	.72	
15. I wouldn't make friends if important people didn't like me.	.69	
7. I must play up to powerful others.	.68	
5. I am not protected against bad luck.	.45	
21. The number of friends I have is a matter of fate.	.44	
16. I can determine what happens in my life.		.83
17. I am able to protect my best interests.		.68
20. My life is determined by my own actions.		.49

Cronbach's alpha (α): Factor 1: .78

Factor 2: .69

KMO Sampling Adequacy = .78

Percentages of Total Variance explained: Total : 44.4%

Factor 1 : 28.6%

Factor 2 : 15.8%

as well as for each group separately on the two factors. In each case, the alpha coefficient was above the minimum acceptable value of .60. The alpha coefficients for Factor 1 (External Locus of Control) were .88 for relapsers and .66 for non-relapsers. The alpha coefficients for Factor 2 (Internal Locus of Control) were .67 for relapsers and .70 for non-relapsers. Because of the good internal reliability across groups, results based on group comparisons involving these two factors could be reliably interpreted.

Self-Efficacy. Sixteen of the original 23 items in the Sherer Self-Efficacy Scale produced sufficient inter-item correlations to be included in the final factor analysis. Five factors emerged in the final solution, with all items loading significantly and distinctly on each factor. Table 2 presents a summary of the results from the final factor analysis. The first factor consisted of three items, with loadings ranging from .84 to .64. The items making up this factor were all related to one's ability to confront or initiate difficult tasks. Four items loaded significantly on the second factor, and were all identified as social self-efficacy items. Factor 3 consisted of three items that described one's ability to cope with problems, while the three items in Factor 4 all related to persistence. The final factor included three items that, if taken together, present a picture of general self-efficacy. All five factors

Table 2

Factor Analysis of the Sherer Self-Efficacy Scale Items.

Factor 1: Confront/Initiate Difficult Tasks
Factor 2: Social Self-Efficacy
Factor 3: Ability to Cope with Problems
Factor 4: Persistence
Factor 5: General Self-Efficacy

Item	F1	F2	F3	F4	F5
7. I try complicated things.	.84				
12. I confront difficult things.	.66				
6. I face difficulty.	.64				
18. I easily make friends.		.81			
23. I am able to make friends.		.73			
22. I do well in social situations.		.55			
19. I approach new people easily.		.54			
17. I can deal with most problems.			.71		
11. I handle new problems well.			.62		
16. I don't give up easily.			.55		
5. I complete what I start.				.75	
4. I achieve goals that I set.				.63	
2. I get down to work promptly.				.48	
1. I make plans work.					.83
8. I finish unpleasant tasks.					.48
15. I am a self-reliant person.					.43

Cronbach's alpha (α): Factor 1: .83
Factor 2: .73
Factor 3: .73
Factor 4: .71
Factor 5: .64

KMO Sampling Adequacy = .78

Percentages of Total Variance explained:

Total :	55.8%
Factor 1 :	30.0%
Factor 2 :	11.4%
Factor 3 :	5.6%
Factor 4 :	4.7%
Factor 5 :	4.1%

together accounted for 55.8% of the total variance in this sample.

Internal consistency and reliability of all subscales were found to be sufficient for the total group as well as for the individual groups. Alpha coefficients ranged from a low of .64 on the general self-efficacy subscale for non-relapsers, to a high of .83 for the total group on Factor 1.

Self-Esteem. Due to significant inter-item correlations, all ten of the Rosenberg Self Esteem Scale items were included in the final factor analysis. Nine of the ten items loaded distinctly on one factor. Question nine loaded significantly on two factors and was subsequently eliminated from further analyses. The results of the final factor analysis are presented in Table 3. The remaining nine items loaded onto a single factor, labeled General Self-Esteem. Correlations on all items were well above the minimum loading criterion, ranging from .79 to .49.

Internal consistency for the resulting subscale was very good for both the total and individual groups. Alpha coefficients ranged from .78 for the non-relapsers to .90 for the relapsers, with an overall alpha of .85 for the total group. The final factor (General Self-Esteem) was found to account for 44.2% of the total variance explained for this sample.

Level of Spirituality. As with all other scales, a

Table 3

Factor Analysis of the Rosenberg Self-Esteem Scale Items.

Factor 1: General Self-Esteem

Item	Factor 1
6. I have a positive attitude toward myself.	.79
7. I am satisfied with myself.	.79
5. I do not have much to be proud of.*	.77
1. I feel that I'm a person of worth.	.70
3. I feel I am a failure.*	.66
8. I wish I had more self-respect.*	.59
2. I have a number of good qualities.	.57
4. I am able to do things as well as others.	.55
10. I am no good at all.*	.49

Cronbach's alpha (α) = .85

KMO Sampling Adequacy = .85

Percentages of Total Variance explained: Total : 44.2%

Factor 1 : 44.2%

Note. * = reversed score

factor analysis (PAF) with varimax rotation was performed on the items from the Whitfield Spirituality Scale in order to create reliable and interpretable composite scores. A correlation matrix was initially computed for all items, and poorly inter-correlated items were eliminated from further analysis. The results of the factor analysis are presented in Table 4. All loadings were distinct and above the minimum loading criterion of .40 for inclusion of an item on a factor. The final factors presented proved to be the most parsimonious and reliable solution. The eight items included in the final analysis loaded on two distinct dimensions, and the two composite factors were subsequently termed the Intrapersonal Spirituality Subscale and the Interpersonal Spirituality Subscale. As a check for internal consistency, a Cronbach alpha coefficient was computed for each factor as well as for the two groups. All alpha coefficients were above the minimum acceptable level of .60, ranging from a low of .70 for non-relapsers on the Interpersonal Spirituality Subscale to a high of .86 for the relapsers on the Intrapersonal Spirituality. Together, Factor 1 (Intrapersonal Spirituality) and Factor 2 (Interpersonal Spirituality) explained 52.0% of the variance in the sample.

Group Comparisons (t-tests). The results of the group comparisons for all subscales are summarized in Table 5. Non-relapsers were found to be significantly higher in their

Table 4

Factor Analysis of the Whitfield Spirituality Scale Items.

Factor 1: Intrapersonal Spirituality

Factor 2: Interpersonal Spirituality

Item	Factor 1	Factor 2
19. I have meaning/purpose in life.	.78	
10. I accept "what is".	.72	
21. I am honest with myself.	.69	
3. I turn negatives into positives.	.68	
1. I live in the Here and Now.	.45	
23. I feel unconditional love for another.		.83
25. I feel connected to others/the universe.		.68
33. I feel unconditionally loved.		.49

Cronbach's alpha (α): Factor 1: .81

Factor 2: .79

KMO Sampling Adequacy = .85

Percentages of Total Variance explained: Total : 52.0%

Factor 1 : 43.5%

Factor 2 : 8.5%

Table 5

Means Values of All Subscale Scores for Relapsers and Non-Relapsers.

	Relapsers (n=26)	Non-Relapsers (n=66)	t	p
LOCUS OF CONTROL				
External Locus of Control	15.46 (6.74)	13.12 (4.18)	4.05	.047*
Internal Locus of Control	15.46 (3.10)	15.45 (3.30)	0.00	ns
SELF-EFFICACY				
Confront/Initiate Tasks	13.73 (3.88)	14.52 (4.12)	0.70	ns
Social Self-Efficacy	17.08 (5.73)	19.95 (4.10)	7.26	.008**
Cope with Problems	15.65 (3.65)	16.70 (2.65)	2.31	ns
Persistence	14.58 (3.62)	15.20 (3.71)	0.53	ns
General Self-Efficacy	14.58 (3.11)	14.74 (3.19)	0.05	ns
SELF-ESTEEM				
General Self-Esteem	45.73 (10.22)	51.32 (6.55)	9.70	.003**
LEVEL OF SPIRITUALITY				
Intrapersonal Spirituality	25.50 (5.12)	28.12 (3.33)	8.33	.005**
Interpersonal Spirituality	16.19 (3.84)	17.66 (2.11)	5.47	.022*

Note. * $p < .05$, ** $p < .01$.

Standard deviations are in parentheses directly below group means.

reported levels of social self-efficacy, self-esteem, and intrapersonal and interpersonal spirituality. These results are highly confirmatory and consistent with the attributes expected to fit best with a social recovery model. Relapsers, on the other hand, reported significantly higher external locus of control scores, suggesting a tendency to see things that happen to them as the result of fate or of the influence of others in their lives.

Demographics. To determine if there were any significant differences between the two groups on the basic demographic variables, *t*-test comparisons were made. Age of respondent was the only demographic variable that differed significantly between the two groups. Relapsers were significantly younger than non-relapsers (M = 42.08, SD = 10.91 versus M = 49.97, SD = 11.70; $t(90) = 9.29$, $p = .003$).

Similar analyses were performed involving years of affiliation with AA and years of sobriety. No significant difference was found between the groups in mean years of AA affiliation (9.06 years for non-relapsers, 7.97 years for relapsers, 8.75 years for total group, $t(90) = 0.72$, $p = .40$). As expected, years of sobriety differed significantly between the two groups, with non-relapsers reporting an average of 8.64 years of sobriety and relapsers reporting an average of 2.47 years ($t(90) = 33.34$, $p < .0001$). Among the respondents included in the analyses, 83.7% reported

attending only AA meetings, with the remaining 16.3% participating in AA as well as other 12-step groups, such as Narcotics Anonymous (NA) and Alanon.

Biogenetic/environmental factors. Familial factors, such as family history of alcoholism, family history of recovery, and family support for the subject's recovery did not differentiate significantly between the two groups. Relapsers and non-relapsers did not differ significantly in total number of alcoholic relatives (M = 2.77 for relapsers versus M = 3.08 for non-relapsers, $t(90) = 0.46$, $p = .50$), total number of relatives in recovery, (M = 0.62 for relapsers versus M = 0.68 for non-relapsers, $t(90) = 0.11$, $p = .74$), or degree of family support for recovery (M = 3.85 for relapsers versus M = 3.79 for non-relapsers, $t(90) = 0.04$, $p = .84$). Likewise, commitment to regular exercise was not found to differ significantly between the groups (M = 3.77 for relapsers versus M = 3.11 for non-relapsers, $t(90) = 0.30$, $p = .59$). Overall, 70.3% of all respondents reported having at least one alcoholic member in their immediate family (i.e., mother, father, sibling), and 96.2% reported having at least one first or second generation alcoholic in the family. Family support for recovery, ranging from a score of 1 (Unsupportive) to 5 (Very Supportive) was found to be fairly good overall (M = 3.80, SD = 1.22), and both groups reported a moderate commitment to exercising (about

once a week).

Involvement in AA. Chi-square(χ^2) goodness of fit tests were performed on the six variables related to level of involvement in AA. The results are presented in Table 6. Statistically significant differences between the two groups were found for completion of all twelve "steps" of the AA program ($\chi^2(1,N=92) = 10.93$, $p = .004$), and service activity for meetings ($\chi^2(1,N=92) = 6.00$, $p = .014$). Almost 82% of non-relapsers had completed all twelve steps of the program, whereas only half of the relapsers had completed all twelve. Furthermore, almost all non-relapsers (92.3%) had been involved in some type of service for a meeting, while only 73.1% of relapsers had participated in any type of group service. A difference approaching statistical significance was found between groups in the area of sponsorship, with 81.5% of non-relapsers reported having a sponsor, versus 64.0% of relapsers reporting a sponsor ($\chi^2(1,N=92) = 3.10$, $p = .078$).

Multiple Regression Analysis. Because of the large number of demographic and psychosocial measures that were available, a multiple regression analysis was carried out using a dichotomized variable for relapse as the dependant variable (DV) and the following variables as independent variables (IVs): age of respondent, completion of all twelve steps, AA service involvement, social self-efficacy,

Table 6

Contingency Tables for Factors Related to AA Involvement.

	Relapsers (n=26)	Non-Relapsers (n=66)	χ^2	p
1. Number of Steps Completed				
No Steps Completed	0.0%	1.5%	10.93	.004**
Some Steps Completed	50.0%	16.7%		
All Steps Completed	50.0%	81.8%		
2. Frequency of Meeting Attendance				
Less than Once a Week	7.7%	9.1%	0.25	ns
1 - 5 Times a Week	61.5%	65.2%		
6+ Times a Week	30.8%	25.8%		
3. Frequency of Speaking at Meetings				
Never	3.8%	3.0%	0.08	ns
Rarely/Monthly	30.8%	28.8%		
Weekly/Daily	65.4%	68.2%		
4. Do You Have A Sponsor ?				
Yes	64.0%	81.5%	3.10	.078
No	36.0%	18.5%		
5. Frequency of "Chairing" Meetings				
Never	11.5%	3.0%	2.72	ns
Once a Year	46.2%	47.0%		
More than Once a Year	42.3%	50.0%		
6. Have You Done Service for Meetings ?				
Yes	73.1%	92.3%	6.00	.014*
No	26.9%	7.7%		

Note. * $p < .05$, ** $p < .01$.

self-esteem, intrapersonal spirituality, and interpersonal spirituality. All variables were chosen based upon previously significant results, as well as upon a priori theoretical considerations. Hierarchical regression was performed to determine if the addition of incremental amounts of information regarding AA involvement and various personality factors would significantly improve prediction of relapse beyond that afforded by age of respondent.

Table 7 displays the partial correlations between the DV and the IVs, the incremental semipartial correlations (sr^2) and corresponding t-values, as well as the overall R^2 and F-value after entry of all seven IVs. R was found to be significantly different from zero at the end of each step. After step 7, with all IVs in the equation, $R = .51$, $F(7,83) = 4.17$, $p < .001$.

After step 1, with age of respondent (AGE) in the equation, $R^2 = .09$, $F_{inc}(1,89) = 8.77$, $p = .004$. After step 2, with the addition of the dichotomized completion of all twelve steps variable (ALLSTEPS), $R^2 = .15$, $F_{inc}(1,89) = 6.67$, $p = .011$. The addition of the completion variable resulted in a significant increment in R^2. Step 3, the addition of the dichotomous AA service involvement variable (SERVICE), resulted in an increment in R^2 that approached significance, with $R^2 = .19$, $F_{inc}(1,89) = 3.68$, $p = .058$. Addition of the social self-efficacy score (SOCLSEF) in step

Table 7

Predictors of Relapse: Hierarchical Multiple Regression.

Source	partial r	sr^2	t	R^2	F
AGE	-.30	.090	8.77**		
ALLSTEPS	-.32	.064	6.67**		
SERVICE	-.23	.034	3.68		
SOCLSEF	-.28	.043	4.81*		
SELFEST	-.30	.020	2.23		
SPIRITIN	-.29	.007	0.74		
SPIRITEX	-.24	.003	0.32		
All Variables				.26	4.17***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

4 was the last variable to yield a significant increment in R^2 (R^2 = .23, F_{inc} = 4.81, p = .031). In steps 5, 6, and 7, the addition of the variables of self-esteem (SELFEST), intrapersonal spirituality (SPIRITIN), and interpersonal spirituality (SPIRITEX) to the equation did not yield reliable increments in R^2.

Discussion

The results of this study are, for the most part, consistent with the findings of previous studies. It would appear that AA works best not only for those who are most involved in the program, but also for those individuals whose personality characteristics fit best with a social recovery model.

No significant differences were found between relapsers and non-relapsers in their internal locus of control. This outcome is not entirely surprising when total group characteristics are taken into consideration (i.e., well-educated, employed, no coexisting psychiatric disorders). Relapsers did, however, score significantly higher in external locus of control than non-relapsers, suggesting a tendency to view things that happen as beyond their immediate control. This result is supported in a comparative review by Bell and Khantzian (1991), who noted that issues around control are considered central to problems with relapse and addiction.

The difference between relapsers and non-relapsers in social self-efficacy is perhaps the most significant finding in this study, since it relates directly to the issue of treatment matching. Relapsers reported significantly lower levels of social self-efficacy than non-relapsers. This outcome is quite possibly the most telling because individuals who are low in social self-efficacy will undoubtedly find the socialization inherent in AA somewhat overwhelming.

The results from analysis of the self-esteem scale imply a positive link between self-esteem and relapse in this population. Levels of self-esteem differed dramatically between the two groups, with relapsers reporting significantly lower levels of self-esteem than non-relapsers. This result is consistent with the suggestion in Johnson et al. (1987) that there is a positive relationship between self-esteem, spirituality, and recovery from alcoholism. Whether the result of previous failure to avoid relapse or a preexisting condition, it would appear that low self-esteem is strongly related to unsuccessful resistence to relapse.

In an analysis of the spirituality scores, non-relapsers reported significantly higher levels of both intrapersonal and interpersonal spirituality than relapsers. These results support the idea that individuals who are able

to find meaning and purpose in their lives and to form loving and supportive connections with others will be more successful in maintaining their sobriety.

Unlike many of the previous studies that drew subjects from inpatient settings, this study specifically set out to investigate differences in a population considered to be more highly motivated and fully functioning than a general treatment population. The average participant in this study was white, in their mid-40's, well-educated, employed, and unaffected by coexisting psychiatric disorders.

Among all the demographic characteristics evaluated, age was the only variable to significantly differentiate between relapsers and non-relapsers, with relapsers being significantly younger. It was interesting to note that while there was a significant difference in age between the two groups, length of affiliation with AA was not found to be significantly different. This outcome suggests that resistance to relapse may naturally increase with age, regardless of length of time in the program. In a study of 56 alcoholic patients who had completed an inpatient AA-modelled treatment program, Alford (1980) found that alcoholics with drinking histories longer than 35 years (i.e., older alcoholics) had a significantly higher rate of success in remaining abstinent than either the 11-20 year group or the 21-35 year group.

Surprisingly, no significant differences were found between the groups in terms of family history or exercise habits. The lack of significant differences on these factors between the relapsers and non-relapsers is most likely due to the homogeneous nature of the total group. Likewise, family support did not prove to be significantly different between the two groups, but was nonetheless found to be fairly strong overall.

Level of involvement in AA also differed significantly between the two groups. Non-relapsers were significantly more likely than relapsers to have worked all twelve steps of the program and to have participated in service for a meeting. Non-relapsers were also somewhat more likely than relapsers to have a sponsor. Sponsorship involves alcoholics helping each other to work the twelve steps of the program on an individual basis. These results advance the belief that AA is most effective for those who are most involved.

AA is a social recovery system. The program consists of alcoholics helping other alcoholics to stay sober by mutually sharing their "experience, strength, and hope" with one another in AA meetings. Without the ability to approach new people and to perform well in novel social situations, success in a social recovery setting such as AA would be difficult. The results presented in this study showed that relapsers were not only lower in social self-efficacy, but

were also less likely to be involved in service at meetings, to have a sponsor, or to have worked all twelve steps of the program.

A considerable number of alcoholism rehabilitation programs today use AA to augment their primary treatment approach. For many clinicians, AA is their only aftercare resource. By globally applying the same referral standards to all clients, treatment professionals run the risk of damaging a client's self-esteem and increasing the likelihood of relapse for clients who are not properly equipped to cope in social settings. Linking clients to appropriate treatment aftercare is crucial if the effect of inpatient treatment is to be sustained and potential relapses avoided. This view is supported in a study by Kadden, Cooney, Getter, and Litt (1989), who found coping skills training to be most effective for subjects who lacked social skills, while interactional therapies, such as AA and group therapy, were more effective for those with better developed social skills.

The results of the multiple regression analysis lend further support to the idea of appropriate client/treatment matching. The analysis strengthens the contention that those individuals who are more involved in working the program of AA (i.e., completing all twelve steps, involvement in meeting service) and are higher in social self-efficacy will

be more successful in achieving long-term sobriety.

If treatment professionals wish to continue to refer individuals to AA as part of their aftercare strategy, steps must be taken to make certain that clients have the requisite social skills and personality fit to maximize their chances of success in a social recovery setting. The coping skills training program developed by Monti, Abrams, Kadden, and Cooney (1989) is one example of a program which prepares the client to transition into a social recovery system. Based on a cognitive-social learning theory of alcohol abuse, the skills training program is divide into two main sections: interpersonal skill building, such as improving communication skills and enhancing social support networks, and intrapersonal skill building, including cognitive coping and relapse prevention planning. Through careful inpatient preparation and appropriate aftercare matching, the long-range effectiveness of formal treatment programs will be realized more fully and the potential for relapse reduced significantly.

As stated in Chapter 5, "How It Works," from Alcoholics Anonymous (1976), "Rarely have we seen a person fail who has thoroughly followed our path" (p. 58) and "Half measures availed us nothing" (p. 59). The results of this study indicate that among the long-term, dedicated AA membership, the degree of involvement in AA and the ability to

effectively socialize in novel situations are key to resisting relapse.

References

AA as a Resource for the Medical Profession. (1982). New York, NY: Alcoholics Anonymous World Services.

Alcoholics Anonymous (1976). Alcoholics anonymous, 3rd ed. New York: AA World Services, Inc.

Alford, G.S. (1980). Alcoholics Anonymous: An empirical outcome study. Addictive Behaviors, 5, 359-370.

Annis, H.M. (1990). Relapse to substance abuse: Empirical findings within a cognitive-social learning approach. Journal of Psychoactive Drugs, 22, 117-124.

Annis, H.M., & Davis, C.S. (1989). Relapse prevention training: A cognitive-behavioral approach based on self-efficacy theory. Journal of Chemical Dependency Treatment, 2, 81-103.

Anthenelli, R.M., & Schuckit, M.A. (1990). Genetic studies of alcoholism. The International Journal of the Addictions, 25, 81-94.

Bandura, A. (1977). Self-efficacy: Toward a unified theory of behavioral change. Psychological Review, 84, 191-215.

Bell, C.M., & Khantzian, E.J. (1991). Contemporary psychodynamic perspectives and the disease concept of addiction: Complementary or competing model? Psychiatric Annals, 21, 273-281.

Brooner, R.K., Templer, D., Svikis, D.S., Schmidt, C., & Monopolis, S. (1990). Dimensions of alcoholism: A multivariate analysis. Journal of Studies on Alcohol, 51, 77-81.

Brown, H.P., Peterson, J.H., & Cunningham, O. (1988). A behavioral/cognitive spiritual model for a chemical dependency aftercare program. Alcoholism Treatment Quarterly, 5, 153-175.

Brownell, K.D., Marlatt, G.A., Lichtenstein, E., & Wilson, G.T. (1986). Understanding and preventing relapse. American Psychologist, 41, 765-782.

Chaney, E.F., O'Leary, M.R., & Marlatt, G.A. (1978). Skill training with alcoholics. Journal of Consulting and Clinical Psychology, 46, 1092-1104.

Corrington, J.E., Jr. (1989). Spirituality and recovery: Relationships between levels of spirituality, contentment, and stress during recovery from alcoholism in AA. Alcoholism Treatment Quarterly, 6, 151-165.

Ellis, D., & McClure, J. (1992). In-patient treatment of alcohol problems: Predicting and preventing relapse. Alcohol and Alcoholism, 27, 449-456.

Gallant, D.M. (1989). Prognosis and relapse in alcoholism. Alcoholism Clinical and Experimental Research, 13, 465.

Gilbert, F.S. (1991). Development of a "steps questionnaire". Journal of Studies on Alcohol, 52, 353-360.

Gorski, T.T. (1989). The CENAPS model of relapse prevention planning. Journal of Chemical Dependency Treatment, 2, 153-169.

Hunt, W.A., Barnett, L.W., & Branch, L.G. (1971). Relapse rates in addiction programs. Journal of Clinical Psychology, 27, 455-456.

Hoffman, N.G., Harrison, P.A. & Belille, C.A. (1983). Alcoholics Anonymous after treatment: Attendance and abstinence. The International Journal of the Addictions, 18, 311-318.

Johnson, E.E., Nora, R.M., Tan, B., & Bustos, N. (1991). Comparison of two locus of control scales in predicting relapse in an alcoholic population. Perceptual and Motor Skills, 72, 43-50.

Johnson, R.A., Sandler, K.R., & Griffin-Shelley, E. (1987). Spirituality and the regulation of self-esteem. Alcoholism Treatment Quarterly, 4, 1-12.

Kadden, R.M., Cooney, N.C., Getter, H., & Litt, M.D. (1989). Matching alcoholics to coping skills or interactional therapies: Posttreatment results. Journal of Consulting and Clinical Psychology, 57, 698-704.

Khantzian, E.J. (1986). A contemporary psychodynamic approach to drug abuse treatment. American Journal of Drug and Alcohol Abuse, 12, 213-222.

Krippenstapel, P. (1987). A fresh look at relapse. Alcoholism Treatment Quarterly, 4, 1-17.

Knouse, V.H., & Schneider, H.G. (1987). Recovering alcoholics: Personality and aftercare factors. Psychological Reports, 61, 595-601.

Levenson, H. (1973). Multidimensional locus of control in psychiatric patients. Journal of Consulting and Clinical Psychology, 41, 397-404.

Marlatt, G.A., & Gordon, J.R. (1985). Relapse prevention. New York: Guilford Press.

McCown, W. (1989). The relationship between impulsivity, empathy and involvement in twelve step self-help substance abuse treatment groups. British Journal of Addictions, 84, 391-393.

Miller, L. (1989). Predicting relapse and recovery in alcoholism and addiction: Neuropsychology, personality, and cognitive style. Journal of Substance Abuse Treatment, 8, 277-291.

Miller, P.J., Ross, S.M., Emmerson, R.Y., & Todt, E.H. (1989). Self-efficacy in alcoholics: Clinical validation of the situational confidence questionnaire. Addictive Behaviors, 14, 217-224.

Monti, P.M., Abrams, D.B., Kadden, R.M., and Cooney, N.L. (1989). Treating alcohol dependence: A coping skills training guide. New York: Guilford Press.

Moos, R.H., & Finney, J.W. (1983). The expanding scope of alcoholism treatment evaluation. American Psychologist, 38, 1036-1044.

O'Brien, E.J. (1985). Global self-esteem scales: Unidimensional or multidimensional? Psychological Reports, 57, 383-389.

Pettinati, H.M., Sugerman, A.A., DiDonato, N., & Maurer, H.S. (1982). The natural history of alcoholism over four years after treatment. Journal of Studies on Alcohol, 43, 201-215.

Rosenberg, M. (1965). Society and the adolescent self-image. New Jersey: Princeton University Press.

Shapurian, R., Hojat, M., & Nayerahmadi, H. (1987). Psychometric characteristics and dimensionality of a Persian version of the Rosenberg Self-esteem Scale. Perceptual and Motor Skills, 65, 27-34.

Sheeren, M. (1988). The relationship between relapse and involvement in Alcoholics Anonymous. Journal of Studies on Alcohol, 49, 104-106.

Sherer M., Maddux, J.E., Merchandante, B., Prentice-Dunn, S., Jacobs, B., & Rogers, R.W. (1982). The self-efficacy scale: Construction and validation. Psychological Reports, 51, 663-671.

Thurstin, A.H., Alfano, A.M., & Nerviano, V.J. (1987). The efficacy of AA attendance for aftercare of inpatient alcoholics: Some follow-up data. The International Journal of the Addictions, 22, 1083-1090.

Vaillant, G.E. (1988). What can long-term follow-up teach us about relapse and prevention of relapse in addiction? British Journal of Addiction, 83, 1147-1157.

Vaillant, G.E., & Milofsky, E.S. (1982). The etiology of alcoholism. American Psychologist, 37, 494-503.

von Knorring, L., Oreland, L., & von Knorring, A.L. (1987). Personality traits and platelet MAO activity in alcohol and drug abusing teenage boys. Acta Psychiatrica Scandinavica, 75, 307-314.

Watson, L. (1991). Paradigms of recovery: Theoretical implications for relapse prevention in alcoholics. Journal of Drug Issues, 21, 839-858.

Whitfield, C.L. (1984). Stress management and spirituality during recovery: A transpersonal approach. Part 1: Becoming. Alcoholism Treatment Quarterly, 1, 3-54.

APPENDIX A.

Survey Instrument with Instructions.

Meeting Name:_____

Meeting Day :_____

Meeting Time:_____

INSTRUCTIONS

Please read all instructions carefully before beginning the survey !!!

On the next few pages you will find a list of statements which you are asked to read and respond to.

In Part I, each statement asks you to decide how much you agree or disagree with it. For these statements, please write the number which reflects your level of agreement or disagreement on the line directly to the left of the question.

In Parts II, III and IV, each statement asks you to either check or write the single most appropriate response, unless otherwise indicated.

Please answer the items as accurately and honestly as you can. There are no right or wrong answers, and no one else will know how you have responded. Some of the items may sound very similar; however, please read each item carefully before answering. Also, you may feel that a few of the items may be difficult to answer. In these cases, please choose the answer that best represents your viewpoint. It is important that each and every question be answered to the best of your ability.

Since the time allowed in this study is limited, **please be sure to complete and mail this survey within 1 week of receiving it.** Your cooperation in this matter is greatly appreciated.

Thank you very much for your participation !

Part I.

Please read each of the following statements and indicate the degree to which you agree or disagree with it using the 7 point scale presented below.
(i.e _____ 1. I am an outgoing person.)

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree

_____ 1. Whether or not I get to be a leader depends mostly on my ability.

_____ 2. To a great extent my life is controlled by accidental happenings.

_____ 3. I feel like what happens in my life is mostly determined by powerful people.

_____ 4. When I make plans, I am almost certain to make them work.

_____ 5. Often there is no chance of protecting my personal interests from bad luck happenings.

_____ 6. When I get what I want, it's usually because I'm lucky.

_____ 7. Even if I were a good leader, I would not be made a leader unless I play up to those in positions of power.

_____ 8. How many friends I have depends on how nice a person I am.

_____ 9. I have often found that what is going to happen will happen.

_____ 10. My life is chiefly controlled by powerful others.

_____ 11. People like myself have very little chance of protecting our personal interests when they conflict with those of powerful other people.

_____ 12. It's not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune.

_____ 13. Getting what I want means I have to please those people above me.

_____ 14. Whether or not I get to be a leader depends on whether I'm lucky nough to be in the rightplace at the right time.

_____ 15. If important people were to decide they didn't like me, I probably wouldn't make many friends.

_____ 16. I can pretty much determine what will happen in my life.

_____ 17. I am usually able to protect my best interests.

_____ 18. When I get what I want, it's usually because I worked hard for it.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree

_____ 19. In order to have my plans work, I make sure that they fit in with the desires of people who have power over me.

_____ 20. My life is determined by my own actions.

_____ 21. It's chiefly a matter of fate whether or not I have a few friends or many friends.

_____ 22. When I make plans, I am certain I can make them work.

_____ 23. One of my problems is that I cannot get down to work when I should.

_____ 24. If I can't do a job the first time, I keep trying until I can.

_____ 25. When I set important goals for myself, I rarely achieve them.

_____ 26. I give up on things before completing them.

_____ 27. I avoid facing difficulties.

_____ 28. If something looks too complicated, I will not even bother to try it.

_____ 29. When I have something unpleasant to do, I stick to it until I finish.

_____ 30. When I decide to do something, I go right to work on it.

_____ 31. When trying to learn something new, I soon give up if I am not initially successful.

_____ 32. When unexpected problems occur, I don't handle them well.

_____ 33. I avoid trying to learn new things when they look too difficult.

_____ 34. Failure just makes me try harder.

_____ 35. I feel insecure about my ability to do things.

_____ 36. I am a self-reliant person.

_____ 37. I give up easily.

_____ 38. I don't seem able to deal with most problems that come up in life.

_____ 39. It is difficult for me to make new friends.

_____ 40. If I see someone I would like to meet, I go to that person instead of waiting for him or her to come to me.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree

_____ 41. If I meet someone interesting who is hard to make friends with, I'll soon stop trying to make friends with that person.

_____ 42. When I'm trying to become friends with someone who seems uninterestedat first, I don't give up easily.

_____ 43. I do not handle myself well in social gatherings.

_____ 44. I have acquired my friends through my personal abilities at making friends.

_____ 45. I feel that I'm a person of worth, at least on an equal basis with others.

_____ 46. I feel that I have a number of good qualities.

_____ 47. All in all, I am inclined to feel that I am a failure.

_____ 48. I am able to do things as well as most other people.

_____ 49. I feel I do not have much to be proud of.

_____ 50. I take a positive attitude toward myself.

_____ 51. On the whole, I am satisfied with myself.

_____ 52. I wish I could have more respect for myself.

_____ 53. I certainly feel useless at times.

_____ 54. At times I think I am no good at all.

_____ 55. I live in the Here and Now.

_____ 56. I know there is a power greater than I.

_____ 57. I turn the negative things in my life into the positive.

_____ 58. I regularly practice meditation or prayer.

_____ 59. I feel very open to learning about myself from others.

_____ 60. I exercise regularly.

_____ 61. I am able to detach from my frustrations by viewing my life as a "game" or melodrama.

_____ 62. I am amused about or laugh at myself.

_____ 63. I am able to concentrate or focus on what I am doing.

_____ 64. I accept "what is".

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree

_____ 65. I regularly take time off for myself for relaxation and recreation.

_____ 66. I see the paradoxes in my life, i.e. life's opposites as compatible with each other.

_____ 67. I regularly work a self help program (eg. AA, Al-Anon, other).

_____ 68. Even though I do not always get what I want, I see everything that happens to me as "perfect", i.e. just the way it should be.

_____ 69. I love someone and feel loved by someone important to me.

_____ 70. I have a sense of being able to differentiate my mind (or ego) from my spirit (or higher self).

_____ 71. Regarding my death, I feel prepared and unafraid.

_____ 72. I feel an emptiness or void.

_____ 73. I have a meaning, purpose or mission in my life.

_____ 74. I am honest with others.

_____ 75. I am honest with myself.

_____ 76. I practice forgiveness.

_____ 77. I feel unconditional love for another.

_____ 78. I choose to have peace of mind.

_____ 79. I feel connected to others and to the Universe.

_____ 80. I feel sexually fulfilled.

_____ 81. I trust most people.

_____ 82. I am gentle.

_____ 83. I enjoy even my most menial tasks such as cleaning the toilet.

_____ 84. I accept other's choices for themselves, even when they differ from what I would choose for them.

_____ 85. I feel firmly balanced and grounded.

_____ 86. I feel accepting and accepted.

_____ 87. I feel unconditionally loved.

_____ 88. I am aware of my feelings and express them in a healthy way. (healthy = no unfinished business or resentments).

	Circle One:	
I have had the feeling of being close to a powerful spiritual force that seemed to lift me out of myself.	YES	NO

Part II.

Please read each question carefully and answer each question as directed.

1. Is there anyone else in your family has an alcohol or drug problem ? **(CHECK ALL THAT APPLY)**

_____ Mother	_____ Maternal Grandmother/Grandfather
_____ Father	_____ Paternal Grandmother/Grandfather
_____ Brother/Sister	_____ Maternal Cousin
_____ Maternal Aunt/Uncle	_____ Paternal Cousin
_____ Paternal Aunt/Uncle	_____ Other (Please specify):_____

2. Is this person also in recovery ? **(WRITE "Y" FOR YES, "N" FOR NO)**

_____ Mother	_____ Maternal Grandmother/Grandfather
_____ Father	_____ Paternal Grandmother/Grandfather
_____ Brother/Sister	_____ Maternal Cousin
_____ Maternal Aunt/Uncle	_____ Paternal Cousin
_____ Paternal Aunt/Uncle	_____ Other (Please specify):_____

3. How supportive/involved is your family in your recovery ? **(CHECK ONE)**

_____ Very Supportive/Involved
_____ Somewhat Supportive/Involved
_____ Neutral
_____ Somewhat Unsupportive/Uninvolved
_____ Not Supportive/Uninvolved

4. How often do you exercise ? **(CHECK ONE)**

_____ Daily
_____ 3-5 times a week
_____ Less than once a week
_____ Rarely
_____ Never

5. How committed are you to a regular exercise regimen ? **(CHECK ONE)**

_____ Very Committed
_____ Committed
_____ Somewhat Committed
_____ Not Very Committed
_____ Not Committed At All

Part III.

Please read each question carefully and check the one answer which best fits your particular situation (unless otherwise directed by the question).

1. What type of "12-Step" meetings do you attend most regularly ?
   (**CHECK ALL THAT APPLY**)
   ____ AA ___ NA ____ ACA/Alanon ____ Other(Please specify):_____

2. What did you consider your "drug(s) of choice" ? (**CHECK ALL THAT APPLY**)

   _____ Alcohol _____ Sedatives _____ Heroin _____ Psychedelics
   _____ Marijuana _____ Prescribed _____ Opiates _____ Inhalants
   _____ Stimulants _____ Cocaine _____ PCP _____ Other Drugs

3. How many (years/months/days) have you been affiliated with 12-step programs (ie. since your very first meeting) ?

   _____ years _____ months _____ days

4. How many (years/months/days) since your last alcohol or drug use ?

   _____ years _____ months _____ days

5. How many "slips" have you had in the last year ? _____ (# of slips)

6. What steps have you already worked ? (**CHECK ALL THAT APPLY**)

   _____ 1st _____ 2nd _____ 3rd _____ 4th _____ 5th _____ 6th
   _____ 7th _____ 8th _____ 9th _____10th _____11th _____12th _____None

7. How frequently do you attend meetings ?

   ___ < 1/ week ___ 1-3/ week ___ 4-5/ week ___ 6-7/ week ___ 7+/ week

8. How often do you speak at meetings ?

   _____ Weekly _____ Daily _____ Monthly _____ Rarely _____ Never

9. Do you have a sponsor ? _____ Yes _____ No

10. How often do you "chair" at meetings ?

    _____ Never _____ Once a week _____ Once a month _____ Once a year

11. Have you done service for a 12-step meeting (i.e. coffee person, literature, Intergroup representative, secretary) ? _____ Yes _____ No

12. How would you best describe your drinking/using behavior ?

    _____ Maintenance or Daily Drinker/User _____ Periodic or Binge Drinker/User

13. How were you originally referred to AA ?

    _____ Self-Referred _____ Family/Friend _____ Treatment Program
    _____ Therapist _____ Legal System _____ Other (Specify):_____
    (Courts, DUI)

Part IV.

The following is a series of questions about yourself and your background. Please read each question and check or write the most appropriate response.

1. Age _____ years old

2. Gender _____ Male _____ Female

3. Ethnicity _____ White _____ Black _____ Hispanic
_____ Asian _____ Other: (Please specify)_____

4. Orientation _____ Heterosexual _____ Lesbian/Gay/Bisexual

5. Marital Status _____ Single _____ Involved _____ Married
_____ Separated _____ Divorced _____ Widowed

6. Education Level _____ Attended high school
_____ High school graduate
_____ Attended college
_____ College graduate
_____ Attend training/vocational school
_____ Post-graduate study

7. Employment Status _____ Employed full-time
_____ Employed part-time
_____ Not currently employed

8. Any Psychiatric Problems ? _____ None
_____ Major Depression
_____ Bipolar Disorder (Manic Depressive)
_____ Schizophrenia
_____ Other: (Please specify)_____

End of Survey.

Please recheck both sides of each sheet of the survey to insure that all questions have been answers completely and correctly before mailing.

APPENDIX B.

Signed Approval Forms.

SJSU SAN JOSE STATE UNIVERSITY

A campus of The California State University

Office of the Academic Vice President • *Associate Academic Vice President* • *Graduate Studies and Research*
One Washington Square • San José, California 95192-0025 • 408/924-2480

To: Kristin M. Wieduwilt
1325 Wright Ave.
Sunnyvale, CA 94087

From: Serena W. Stanford Serena W. Stanford
AAVP, Graduate Studies and Research

Date: November 29, 1993

The Human Subjects-Institutional Review Board has approved your request to use human subjects in the study entitled:

"Factors Related to Relapse in the Dedicated Twelve-Step Population"

This approval is contingent upon the subjects participating in your research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project, and with regard to any and all data that may be collected from the subjects. The Board's approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Dr. Serena Stanford immediately. Injury includes but is not limited to bodily harm, psychological trauma and release of potentially damaging personal information.

Please also be advised that each subject needs to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at anytime. Further, a subject's participation, refusal to participate or withdrawal will not affect any services the subject is receiving or will receive at the institution in which the research is being conducted.
If you have questions, please contact me at 408-924-2480.

APPROVED BY THE MASTER'S THESIS COMMITTEE

John S. Kelly, Ph.D.
Professor of Psychology
San Jose State University

Michael Alessandri, Ph.D.
Professor of Psychology
San Jose State University

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Professor of Psychology
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